

Safety Data Sheet D-GLUCOSE

SDS no. DKS2RN0C • Version 1.0 • Date of issue: 2024-02-05

SECTION 1: Identification

GHS Product identifier

Product name D-GLUCOSE

Other means of identification

D Glucose Monohydrate AR (Dextrose Monohydrate)	GA017
D Glucose Monohydrate AR (Dextrose Monohydrate)	GA017-25KG
D Glucose Monohydrate AR (Dextrose Monohydrate)	GA017-500G
D Glucose Monohydrate AR (Dextrose Monohydrate)	GA017-5KG
D Glucose Anhydrous AR (Dextrose Anhydrous)	GA018
D Glucose Anhydrous AR (Dextrose Anhydrous)	GA018-1KG
D Glucose Anhydrous AR (Dextrose Anhydrous)	GA018-25KG
D Glucose Anhydrous AR (Dextrose Anhydrous)	GA018-500G
D Glucose Anhydrous AR (Dextrose Anhydrous)	GA018-5KG
D Glucose Anhydrous (Dextrose Anhydrous)	GL018
D Glucose Anhydrous LR (Dextrose Anhydrous)	GL018-25KG
D Glucose Anhydrous LR (Dextrose Anhydrous)	GL018-500G
D Glucose Anhydrous LR (Dextrose Anhydrous)	GL018-5KG
D Glucose Anhydrous BP (Dextrose Anhydrous)	GP018-25KG
D Glucose Monohydrate Reagent Grade	GR017-25KG

Grape sugar, Dextrose, Glucose, Corn sugar, Dextrosol

Recommended use of the chemical and restrictions on use

Confectionery, infant foods, medicine, brewing and wine-making, intermediate, caramel colouring, baking and canning, source of methane by anaerobic fermentation, source of certain amino acids by fermentation and laboratory reagent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

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Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as non-Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

Not a hazardous substance or mixture.

GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

Mixtures

Components

Component	CAS no.	Concentration
D-(+)-Glucose (EC no.: 200-075-1)	50-99-7	100 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.		
D-Glucose monohydrate	14434-43-7	100 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice

First Aid Facilities: Maintain eyewash fountain in work area.

If inhaled

Remove victim to fresh air.

In case of skin contact

Remove contaminated clothing and wash affected skin with soap and water.

In case of eye contact

Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.

If swallowed

Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically based on judgement of doctor and individual reactions of the patient.

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Small fire: Use dry chemical, CO₂, water spray or foam.

Large fire: Use water spray, fog or foam.

If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.

Specific hazards arising from the chemical

This material is combustible and may cause danger in dust explosion. May release oxides of carbon.

May burn but do not ignite readily. Containers may explode when heated. Runoff may pollute waterways. Fire may produce irritating, poisonous and/or corrosive gases. In sufficient quantity and reduced particle size is capable of creating a dust explosion.

Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid inhalation, contact with skin, eyes and clothing.

Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up

Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid generation or accumulation of dusts. Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Wash hands and face thoroughly after working with material. Use with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Store away from oxidizing agents. Store in a cool, dry place. Keep containers closed at all times. Keep in a well-ventilated place

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

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Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

RECOMMENDATION: Excellent: Nitrile, Neoprene, PVC. Poor: NR latex.

Body protection

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	White granular powder or colourless crystals.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	Anhydrous: 146 °C Monohydrate: 83 °C
Boiling point or initial boiling point and boiling range	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	~500 °C
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	Anhydrous: 5.9 (0.5M, H2O @ 20°C) Monohydrate: 6 - 7 (100g/L, H2O @ 20°C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Very soluble (470 g/L @ 20 °C). Solubility in Organic Solvents: Soluble in hot methanol, hot pyridine and alcohol. Slightly soluble in acetone. Insoluble in ether.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: Anhydrous: 1.544 g/cm3 Monohydrate: 0.63 g/cm3
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Sweet taste.

Exhibits mutarotation from $[\alpha]_{20}^D=+112.2^\circ$ to $[\alpha]_{20}^D=+52.7^\circ$ at $c=4$ in water.

Has the D (right-handed) configuration and is dextrorotatory.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Reacts with sodium nitrite plus potassium nitrite, sodium peroxide plus potassium nitrate.

Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Strong oxidising agents, sodium nitrate.

Hazardous decomposition products

Oxides of carbon.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ingestion: Extremely large oral doses may cause gastrointestinal disturbances.

Inhalation: Mild irritant. Dust may irritate respiratory system.

Skin corrosion/irritation

No data available.

Serious eye damage/irritation

Contact may cause transient, mechanical irritation.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

No data available.

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Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

SECTION 12: Ecological information

Toxicity

No data available.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available.

Endocrine disrupting properties

No data available.

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)